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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/042,068

01/08/2002

Tomokuni Wauke

9281-4240

3902

7590

09/15/2004

Brinks Hofer Gilson & Lione
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EXAMINER

LE, DANG D

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 09/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/042,068

Applicant(s)

WAUKE, TOMOKUNI

Examiner

Dang D Le

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-70 is/are pending in the application.
4a) Of the above claim(s) 3-8, 11-35 and 37-69 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1, 2, 9, 10, 36 and 70 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1, 2, 9, 10, 36 and 70 have been considered but are moot in view of the new ground(s) of rejection.

Election/Restrictions

2. Previously submitted claims 68 and 69 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: claims 68 and 69 belong to the second species restricted in paper dated 4/1/03

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 68 and 69 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 9, 10, 36 and 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leung et al. (5,610,492) in view of Schaeffer (4,315,171).

Regarding claim 1, Leung et al. shows an inner rotor motor (Figures 2, 4A and 4B) comprising:

- A rotor (26) having a plurality of permanent magnetic poles circumferentially arranged, and
- A stator (30) having a stator core that includes a plurality of magnetic pole teeth (36, 37) opposing a circumference of the rotor, a coil being provided on the stator, the magnetic pole teeth each having a rotor-opposing surface,
- Wherein the stator extends not more than 180 degrees with respect to a central angle of the rotor, and an annular pitch of the rotor-opposition surfaces and an annular pitch of the permanent magnet poles as measured about an axis of symmetry of the rotor differ from each other (Figures 4A and 4B).

Leung et al. does not show a single coil being provided on each of the magnetic pole teeth.

Schaeffer shows that a single coil could be provided on each of the magnetic pole teeth (Figures 2, 10, 11, 20 and 22) for the purpose of increasing torque (more coils, more power).

Since Leung et al. and Schaeffer are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to make a stator with a single coil on each tooth as taught by Schaeffer for the purpose discussed above.

Regarding claims 2, 9, 10, 36 and 70, it is noted that Leung et al. and Schaffer also show all of the limitations of the claimed invention including the stator extending not more than 90 degrees and six teeth (Figure 22, Schaffer).

5. Claims 1, 2, 9, 10, 36 and 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wavre (5,642,013) in view of Schaeffer (4,315,171).

Regarding claim 1, Wavre shows an inner rotor motor (Figures 4, 9 and 15) comprising:

- A rotor (9) having a plurality of permanent magnetic poles (8) circumferentially arranged, and
- A stator (1) having a stator core that includes a plurality of magnetic pole teeth (25) opposing a circumference of the rotor, a single coil (31) being provided on each of the magnetic pole teeth the stator, the magnetic pole teeth each having a rotor-opposing surface,
- Wherein the stator extends 360 degrees with respect to a central angle of the rotor, and an annular pitch of the rotor-opposition surfaces and an annular pitch of the permanent magnet poles as measured about an axis of symmetry of the rotor differ from each other (Figure 4).

Wavre does not show the stator extending not more than 180 degrees with respect to a central angle of the rotor.

Schaeffer shows the stator extending not more than 180 degrees with respect to a central angle of the rotor (Figure 22) for the purpose of making better utility of laminations stock.

Since Wavre and Schaeffer are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to extend the stator not more than 180 degrees as taught by Schaeffer for the purpose discussed above.

Regarding claims 2, 9, 10, 36 and 70, it is noted that Wavre and Schaeffer also shows all of the limitations of the claimed invention including the stator extending not more than 90 degrees and six teeth.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

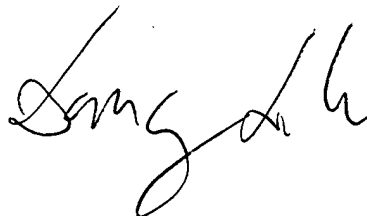
Information on How to Contact USPTO

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dang D Le whose telephone number is (571) 272-2027. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571) 272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

9/13/04



**DANG LE
PRIMARY EXAMINER**